

*Alternanthera sessilis* [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Magnoliopsida	Caryophyllales	Amaranthaceae

**Common name** brede embellage (English), palewawae (English, Hawaii Hawai'i), sessile joyweed (English), common roadside weed (English), okula beluulechad (English, Palau Islands), dwarf copperleaf (English), joyweed (English), fisi'i'ano (English, Tonga Islands), galuti (English, Fiji Islands), lianzi cao (English, China), vao sosolo (English, Samoan), ti (English, Nuku Hiva (Nukahiva) Island), horng-tyan-wu (English), periquito-sessil (English), phak pet thai (English, Taiwan), magloire (French), bhirangijhar (English, Nepal), mukunuwanna (English, Sri Lanka), brède chevrette (French), mata kura (English, 'Atiu Island)

**Synonym** *Achyranthes sessilis* , (L.) Desf. Ex. Steud.  
*Alternanthera glabra* , Moq.  
*Gomphrena sessilis* , L.  
*Alternanthera nodiflora* , R. Br.  
*Alternanthera ficoidea* , (L.) P. Beauv.  
*Alternanthera polygonoides* , (L.) R. Br.  
*Alternanthera tenella* , Moq.  
*Alternanthera trianda* , Lam.  
*Illecebrum sessile* , (L.) L.  
*Achyranthes linearifolia* , Sw. ex Wikstr.  
*Achyranthes triandra* , Roxb.  
*Achyranthes villosa* , Blanco  
*Allagathera forskalii* , Mart.  
*Alternanthera achyranthes* , Forssk.  
*Alternanthera angustifolia* , R. Br.  
*Alternanthera decipiens* , Benth.  
*Alternanthera denticulata* , R. Br.  
*Alternanthera major* , (Benth.) Domin  
*Alternanthera micrantha* , (Benth.) Domin  
*Alternanthera nana* , R. Br.  
*Alternanthera prostrata* , D. Don.  
*Alternanthera repens* , J.F.Gmel.  
*Alternanthera sennii* , Mattei  
*Alternanthera sibirica* , (de Vest ex Schult.) Steud.  
*Alternanthera tenuissima* , Suess.  
*Alternanthera uliginosa* , (Domin) Dinter  
*Bucholzia polygonoides* , (L.) Mart.  
*Gomphrena polygonoides* , (L.)  
*Illecebrum angustifolium* , (R.Br.) Spreng.  
*Illecebrum denticulatum* , (R.Br.) Spreng.  
*Illecebrum nanum* , (R.Br.) Spreng  
*Illecebrum polygonoides* , (L.) L.  
*Illecebrum sibiricum* , de Vest ex Schult.  
*Illecebrum triandrum* , Llanos  
*Paronychia sessilis* , (L.) Desf.  
*Paronychia tetragona* , Moench  
*Steiremis repens* , Raf.  
*Telanthera polygonoides* , (L.) Moq.

*Achyranthes polygonoides* , (L.) Lam.

## Similar species

*Alternanthera philoxeroides*

## Summary

*Alternanthera sessilis* is a weed that inhabits many areas of the world. It occupies moist areas and can be found from sea level to over 2000m. *Alternanthera sessilis* is a pest of sugarcane, a weed of rice in tropical areas, and an agricultural weed that invades disturbed wet areas in tropical and subtropical regions. It has been used widely around the world for its medicinal uses, as well as for food. The plant has been readily used for food partly due to its abundance.



[view this species on IUCN Red List](#)

## Species Description

*Alternanthera sessilis* has stems that lie flat and are 1-10 dm long. The leaves are sometimes spear-shaped but mostly elliptic and are 0.3-3cm wide. The petioles are 1-5mm long. The bract are shiny white under the flower's sessile spikes. The sepals are 2.5-3mm long and the uticles are 2-2.3mm long (PIER, 2006; Marquesas, undated). *A. sessilis* has a somewhat glistening fruit, that is light-beige yellow (FNWD, 2004). It can reach heights of up to 1 m.

## Lifecycle Stages

During August-October, *Alternanthera sessilis* produces many utricles that spread with wind and water. Not far from where these were blown, seedlings begin to appear in April (Geng, 2006).

## Uses

*Alternanthera sessilis* is used as a topical treatment for the common skin problem cane vulgaris. The antioxidant carotene is found in large amounts in the plant (Jerajoni *et al.* 2004). In southeast Asia young shoots and leaves are ingested as vegetables. In folklore, *A. sessilis* was used for treating sick individuals (USDA, 2004). Gayathri *et al* (2006) state that *A. sessilis* is "used for the treatment of biliousness, dyspepsia associated with sluggish liver, chronic congestion of liver, acute and chronic pyelitis, cystitis, gonorrhea, and strangery and snake bite in Sri Lanka." In India and Sri Lanka, it is used for treatment of gastrointestinal problems. *A. sessilis* is used as a treatment for headaches and vertigo in Nigeria. It is also used to treat hepatitis, bronchitis, and asthma in Taiwan (Jansen, 2004).

*A. sessilis* is a plant that is purchased for a water garden and over the internet for aquariums (Tomaino, 2006). Also, it is bought for its low cost and taste by the people of Sri Lanka (Gayathri, 2006). *A. sessilis* is chopped up when it is fed to ducks and is also fed to pigs (Ogle, 2003). It is used in many different foods in Africa, such as soups, relish, and sauces.

## Habitat Description

*Alternanthera sessilis* is "a plant of damp places, ditches, wet headlands, roadsides, sometimes a weed of plantations", and is located from sea level to elevations over 2000 m. It is also found in waste areas, gardens (PIER, 2006) and open fields (NSCRC, 2003).

## Reproduction

*Alternanthera sessilis* transfers seeds by wind, water, and also rooting at the stem nodes (FNWD, 2004).

## General Impacts

*Alternanthera sessilis* is a pest of sugarcane (Macdonald *et al.* 2003). It is also a weed of rice in tropical areas, and is also associated with bananas and other cereal crops (FNWD, 2004). According to Tomaino (2006), *A. sessilis* is an "agricultural weed that invades disturbed wet areas in tropical and subtropical areas of the U.S." Overall, *A. sessilis* has a "low significant ecological impact" (Tomaino, 2006). *A. sessilis* is said to have impacts on liver problems by having hepatoprotective effects (Lin *et al.* 1994).

## Management Info

**Biological:** Zettler and Freeman (1972) in their discussion on the biocontrol of aquatic plants, state that in India, *Alternanthera sessilis* a near relative of alligatorweed, is affected by the fungal species *Corticium solani*, *Colletotrichum capsici*, *Glomerella cingulata*, *Phoma* spp., and *Albugo bliti*.

## Pathway

*Alternanthera sessilis* can be dispersed through horticultural activities (Maki and Galatowitsch, 2004)

**Principal source:** Pacific Island Ecosystems at Risk (PIER). 2006. [Alternanthera sessilis](#)

**Compiler:** National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

## Review:

**Publication date:** 2005-06-03

## ALIEN RANGE

<b>[3]</b> AMERICAN SAMOA	<b>[1]</b> CHRISTMAS ISLAND
<b>[6]</b> COOK ISLANDS	<b>[3]</b> ECUADOR
<b>[4]</b> FIJI	<b>[8]</b> FRENCH POLYNESIA
<b>[1]</b> GHANA	<b>[1]</b> LAO PEOPLE'S DEMOCRATIC REPUBLIC
<b>[1]</b> MARSHALL ISLANDS	<b>[1]</b> MICRONESIA, FEDERATED STATES OF
<b>[1]</b> NAURU	<b>[1]</b> NEW CALEDONIA
<b>[1]</b> NIGERIA	<b>[1]</b> NORFOLK ISLAND
<b>[1]</b> PAPUA NEW GUINEA	<b>[1]</b> PUERTO RICO
<b>[3]</b> TONGA	<b>[1]</b> TUVALU
<b>[7]</b> UNITED STATES	<b>[1]</b> VANUATU
<b>[1]</b> WALLIS AND FUTUNA	

## BIBLIOGRAPHY

**34** references found for *Alternanthera sessilis*

### Managment information

[Gunasekera, L., J. Bonila. 2001. Alligator Weed: Tasty Vegetable in Australian Backyards?. J. Aquat. Plant Manage. 39: 17-20.](#)

**Summary:** This paper wishes to raise awareness of alligator weed in Australia. It proposes management of the weed so that infestations can be eradicated in Australia.

Available from: <http://www.apms.org/japm/vol39/v39p17.pdf> [Accessed February 27, 2007]

[Maanaki Whenua Landcare Research., 2006. Alligator Weed Agents Dip Out. What's New in Biocontrol of Weeds. Issue 36 May 2006](#)

**Summary:** Available from: <http://www.landcareresearch.co.nz/publications/newsletters/weeds/wtsnew36.pdf> [Accessed February 27 2007]

Macdonald, I.A.W., J.K. Reaser, C. Bright, L.E. Neville, G.W. Howard, S.J. Murphy & G. Preston (eds.). 2003. Invasive alien species in southern Africa: national resources. Global Invasive Species Programme, Cape Town, South Africa.

**Summary:** This paper gives a detailed description of invasive species throughout southern Africa.

Sainty, G. McCorkelle, M. Julien. 1998. Control and spread of Alligator Weed *Alternanthera philoxeroides* (Mart.) Griseb., in Australia: lessons for other regions. *Wetlands Ecology and Management*. 5: 195-201.

**Summary:** This article discusses different ways in which to control the Alligator Weed using herbicides and manual control.

[Zettler, F.W., T.E. Freeman. 1972. Plant Pathogens as Biocontrols of Aquatic Weeds. \*Annu. Rev. Phytopathol.\* 10: 455-470.](#)

**Summary:** This purpose of this paper is to explain problems associated with waterweeds, enumerate the causes of these problems, and consider the relationship and potential plant pathology to the control of waterweeds.

Available from: <http://arjournals.annualreviews.org/doi/pdf/10.1146/annurev.py.10.090172.002323> [Accessed February 27, 2007]

## General information

[Abalude, F.O. 2005. Nutritional Evaluation of Aquatic Weeds in Nigeria. \*EJFAFChE.\* 4\(1\): 835-840.](#)

**Summary:** This paper shows that weeds may not be bad all the time. It is true that they are plant ed in undesirable places sometimes but can also provide beneficial uses.

Available from: [http://ejeafche.uvigo.es/4\(1\)2005/003412005.pdf](http://ejeafche.uvigo.es/4(1)2005/003412005.pdf) [Accessed February 27, 2007]

[Acevedo-Rodriguez, P., F.S. Axlerod. 1999. Annotated Checklist for the Tracheophytes of Rio Abajo Forest Reserve, Puerto Rico. \*Caribbean Journal of Science.\* 35\(3-4\): 265-285.](#)

**Summary:** This is a checklist of tracheophytes to help further the knowledge of and push for more biological research in the reserve.

Available from: [http://academic.uprm.edu/publications/cjs/Vol35b/35\\_265-285.pdf](http://academic.uprm.edu/publications/cjs/Vol35b/35_265-285.pdf) [Accessed February 27, 2007]

[Chandrika, U.G., U. Svanberg, E. Janz. 2005. In vitro accessibility of -carotene from cooked Sri Lankan green leafy vegetables and their estimated contribution to vitamin A requirement. \*Journal of the Science of Food and Agriculture.\* 86\(1\): 54-61.](#)

**Summary:** A study was done to determine the carotene content of seven different leafy vegetables. It was done to calculate the contribution of one traditionally cooked portion of the recommended daily allowance of of retinol.

[Federal Noxious Weed Disseminules in the U.S. \(FNWD\). 2004. \*Alternanthera sessilis\*](#)

**Summary:** This website is used for the responsible identification of plant pests. It discusses the sperad of disseminules throughout the U.S. And how they can potentially become invasive in the United States and throughout the world.

Available from: <http://www.lucidcentral.org/keys/FNW/FNW%20seeds/html/fact%20sheets/Alternanthera%20sessilis.htm> [Accessed February 27, 2007]

[Flora of the Marquesas. Undated. \*Alternanthera sessilis\*.](#)

**Summary:** This website gives a full description of *A. sessilis* on the Marquesas Islands.

Available from:

<http://ravenel.si.edu/botany/pacificislandbiodiversity/marquesasflora/speciesdescr.cfm?genus=Alternanthera&specificceipithet=sessilis&rank=&epithet1=> [Accessed February 27, 2007]

[Gayathri, B.M., K. Balasuriya, G.S. Panduka de S. Gunawardena, R.P.V. Jayantha Rajapakse, H. Ranjith, W. Dharmaratne. 2006. Toxicological studies of the water extract of green leafy vegetable Sessile joy weed \(\*Alternanthera sessilis\*\). \*Current Science.\* 91\(11\): 1517-1520.](#)

**Summary:** This study was done to determine if *A. sessilis* had cytotoxic properties.

Available from: <http://www.ias.ac.in/currsci/dec102006/1517.pdf> [Accessed February 27, 2007]

[Geng, Y. X., Pan, C. Xu, W. Zhang, B. Li, J. Chen. 2006. Phenotypic plasticity of invasive \*Alternanthera philoxeroides\* in relation to different water availability, compared to its native congener. \*ACTA OECOLOGICA.\* 30: 380-385.](#)

**Summary:** This article shows how *Alternanthera philoxeroides* and *Alternanthera sessilis* have different water needs and will often be found in different areas and in different size populations according to water availability.

[Global Invasive Species Database, 2007. \*Alternanthera philoxeroides\*. Similar species](#)

**Summary:** This gives full information on the ecology and distribution, as well as similar species of invasives.

Available from: <http://www.issg.org/database/species/SimilarSpecies.asp?si=763&fr=1&sts=> [Accessed February 27, 2007]

[Institute for Systematic Biology \(ISB\). 2006. Atlas of Florida Vascular Plants: \*Alternanthera sessilis\*.](#)

**Summary:** This website provides a source of information for the distribution of plants throughout the state of Florida. It gives a full list of synonyms and basionyms of the species chosen. Also available are photos for the species.

Available from: <http://www.plantatlas.usf.edu/main.asp?plantID=1868> [Accessed February 27, 2007]

[ITIS \(Integrated Taxonomic Information System\), 2006. Online Database \*Alternanthera sessilis\*.](#)

**Summary:** An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.

Available from : [http://www.itis.gov/servlet/SingleRpt/SingleRpt?search\\_topic=TSN&search\\_value=20773](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=20773) [Accessed February, 27, 2007]

[Jansen, P.C.M. 2004. \*Alternanthera sessilis\* \(L.\) DC. \[Internet\] Record from Protabase. Grubben, G.J.H. & Denton, O.A. \(Editors\). PROTA \(Plant Resources of Tropical Africa/ Ressources végétales de l'Afrique tropicale\), Wageningen, Netherlands.](#)

**Summary:** This website gives information on the distribution of the the species, common names, uses, and the properties of the plant.

[Jerajoni, H.R., R.S. Dhurat, S.A. Kolhapure. 2004. Evaluation of efficacy and safety of Clarina cream in newly diagnosed and previously treated cases of acne vulgaris. \*Indian Journal of clinical Practice.\* 14\(12\): 27-34.](#)

**Summary:** This study was aimed to evaluate the clinical efficacy, and short- and long-term safety of Clarina cream in newly diagnosed and previously treated cases of acne vulgaris.

Available from: [http://www.himalayahealthcare.com/pdf\\_files/clarina004.pdf](http://www.himalayahealthcare.com/pdf_files/clarina004.pdf) [Accessed February 27, 2007]

[Lin, Song-Chow, Y. Lin, S. Shyu, C. Lin. 1994. Hepatoprotective Effects of Taiwan Folk Medicine: \*Alternanthera sessilis\* on Liver Damage Induced by Hepatotoxins. \*Phytotherapy Research.\* 8: 391-398.](#)

**Summary:** This article discusses the various chemical in *A. sessilis* and how it affects the human liver as an instument of medicine.

[Medeiros, A.C., L.L. Loope, C.G. Chemera. 1998. Flowering Plants and Gymnosperms of Haleakala National Park. \*Pacific Cooperative Studies Unit University of Hawaii at Manoa.\*](#)

**Summary:** This report attempts to synopsize current and past information for all flowering plant and gymnosperm species currently and formerly occurring within the National Park, Maui, Hawaiian Islands.

Available from: <http://www.botany.hawaii.edu/faculty/duffy/techr/120.pdf> [Accessed February 27, 2007]

[Missouri Botanical Garden \(Mobot\). 2007. Nomenclatural Database: \*Alternanthera sessilis\*.](#)

**Summary:** This page gives a full taxonomic description of the species. It also gives multiple synonyms for a species.

Available from: [http://mobot.mobot.org/cgi-bin/search\\_vast?name=Alternanthera%20sessilis](http://mobot.mobot.org/cgi-bin/search_vast?name=Alternanthera%20sessilis) [Accessed February 27, 2007]

[National Science Council of the Republic of China \(NSCRC\). 2003. Flora of Taiwan.](#)

**Summary:** This book gives a full description of plants in Taiwan. Also discussed is their distribution in Taiwan.

Available from: <http://stri.discoverlife.org/mp/20q?search=Alternanthera+sessilis#ITIS> [Accessed February 27, 2007]

[Ogle, B.M., H. Tuyet, H. Duyet, N. Dung. 2003. Food, Feed or Medicine: The Multiple Functions of Edible Wild Plants in Vietnam. \*Economic Botany\*. 57\(1\): 103-117.](#)

**Summary:** This paper provides an example from Vietnam of the continued use of a multitude of edible wild vegetables. Vietnamese traditional medicine also holds an important position within the health care system and many of the plants that are used have both dietary and medicinal functions.

Available from: <http://www.bioone.org/archive/0013-0001/57/1/pdf/i0013-0001-57-1-103.pdf> [Accessed February 27, 2007]

[Pacific Island Ecosystems at Risk \(PIER\). 2006. \*Alternanthera sessilis\*.](#)

**Summary:** This website gives detailed information on plant species. It gives an extensive list of distribution and, description, common names, and habitat descriptions.

Available from: [http://www.hear.org/pier/species/alternanthera\\_sessilis.htm](http://www.hear.org/pier/species/alternanthera_sessilis.htm) [Accessed February 27, 2007]

[Thailand Department of Agriculture \(DOA\). Undated. \*Alternanthera sessilis\*.](#)

**Summary:** This website gives a brief description on *A. sessilis* including its Thai name.

Available from: <http://www.doa.go.th/botany/alse.html> [Accessed February 27, 2007]

[Tomaino, A. 2006. Invasive Species Assessment Protocol: U.S. National Assessments. \*Alternanthera sessilis\*](#)

**Summary:** This report addresses the significance and level of a plant at risk in the United States as an invasive species.

Available from: [http://www.fs.fed.us/r9/wildlife/nnis/documents/invasive\\_species\\_assessment\\_Forest\\_Service\\_Region9.pdf](http://www.fs.fed.us/r9/wildlife/nnis/documents/invasive_species_assessment_Forest_Service_Region9.pdf) [Accessed February 27, 2007]

[Upreti, B.R., Y.G. Upreti. 2002. Factors leading to agro-biodiversity loss in developing countries: the case of Nepal. \*Biodiversity and Conservation\*. 11: 1607-1621.](#)

**Summary:** This article is concerned with factors contributing to agro-biodiversity loss in Nepal. The aim of this paper is to analyse the causes of agro-biodiversity loss and draw out some concrete recommendations.

[USDA. 2007. Plants Profile: \*Alternanthera sessilis\* \(L.\) R. Br. ex DC.](#)

**Summary:** This website gives common names and the distribution of the species in the United States.

Available from: <http://plants.usda.gov/java/profile?symbol=ALSE4> [Accessed February 27, 2007]

[USDA, ARS. National Genetic Resources Program. Germplasm Resources Information Network - \(GRIN\) \[Online Database\]. National Germplasm Resources Laboratory, Beltsville, Maryland.](#)

**Summary:** This website shows how the plant *A. sessilis* has had an impact on different cultures for use as food and economic importance. It also gives much information on the distribution of the species.

Available from: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?2713> [Accessed February 27, 2007]

[USDA-NRCS \(Natural Resource Conservation Service\). 2002. \*Alternanthera sessilis\*. The PLANTS Database Version 3.5 \[Online Database\] National Plant Data Center, Baton Rouge, LA.](#)

**Summary:** This website gives information on the distribution of the the species throughout the United States as well as taxonomy information and a species noxious weed status.

Available from: <http://plants.usda.gov/java/profile?symbol=ALSE4> [Accessed February 27, 2007]

[Velde, N.V. 2003. The Vascular Plants of the Majuro Atoll, Republic of the Marshall Islands. \*National Museum of Natural History, Smithsonian Institution, Washington, D.C. Atoll Research Bulletin\*. 503.](#)

**Summary:** This is the first official document of the vascular plants in the Majuro Atoll.

Available from: <http://www.botany.hawaii.edu/faculty/duffy/arb/497-508/503.pdf> [Accessed February 27, 2007]

[Vázquez, O.J., D.A. Kolterman. 1998. Floristic Composition and Vegetation Types of the Punta Guaniquilla Natural Reserve ♦ Cabo Rojo, Puerto Rico. \*Caribbean Journal of Science\*. 34\(3-4\): 265-279.](#)

**Summary:** This article discusses the composition of floristic species in the reserve.

Available from: <http://academic.uprm.edu/publications/cjs/vol34b/265-279.pdf> [Accessed February 27, 2007]

[Wagner, W.L., D.R. Herbst. 2003. Supplement to the Manual of the Flowering Plants of Hawaii. \*University of Hawaii Press\*. 1-77.](#)

**Summary:** The intent of this supplement is to track the numerous new state and island records, taxonomic and nomenclatural changes, and rediscoveries published in the Annual Records of the Hawaii Biological Survey and other literature on Hawaiian vascular plants.

Available from: <http://ravenel.si.edu/botany/pacificislandbiodiversity/hawaiianflora/ManualSupplement3.1.pdf> [Accessed February 27, 2007]

[Wiser, S.K., D.R. Drake, L.E. Burrows, W.R. Sykes. 2002. The potential for long-term persistence of forest fragments on Tongatapu, a large island in western Polynesia. \*Journal of Biogeography\*. 29: 767-787.](#)

**Summary:** This article discusses compositional variation of forest fragments and two factors that directly influence the potential for long-term persistence of these fragments ♦ tree regeneration and alien invasion.

[Xu, K., W. Ye, H. Cao, X. Deng, Q. Yang, Y. Zhang. 2004. The role of diversity and functional traits of species in community invisability. \*Bot. Bull. Acad. Sin.\* 45: 149-157.](#)

**Summary:** This paper discusses the hypothesis of diversity-community invisability and its controversy in the field of invasion ecology.

Available from: <http://ejournal.sinica.edu.tw/bbas/content/2004/2/Bot452-07.html> [Accessed February 27, 2007]